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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,843	07/18/2003	Harold Wiesmann	BSA 03-01	4758
26302	7590	02/28/2006	EXAMINER	
BROOKHAVEN SCIENCE ASSOCIATES/ BROOKHAVEN NATIONAL LABORATORY BLDG. 475D - P.O. BOX 5000 UPTON, NY 11973			TALBOT, BRIAN K	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 02/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/622,843	Applicant(s) WIESMANN ET AL.	
	Examiner Brian K. Talbot	Art Unit 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26, 57 and 58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26, 57 and 58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1762

1. The amendment filed 12/16/05 has been considered and entered. Claims 27-56 have been canceled. Claims 1-26 and 57-58 remain in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. In light of the amendment filed 12/16/05, the 35 USC 112 rejection has been withdrawn.

Claim Rejections - 35 USC § 103

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
5. Claims 1-22,24,26,57 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gressler et al. (5,081,103) in combination with Chevalier et al. (5132,281) further in combination with EP-286,135.

Gressler et al. (5,081,103) teaches a fluorination of superconducting YBCO powder with a fluorinated gas such as NF_2 , NF_3 , NF_3/O_2 etc. (Abstract).

Gressler et al. (5,081,103) fails to teach fluorinating a superconductive film as opposed to a superconducting powder.

Chevalier et al. (5132,281) teaches a process of making fluorine-stabilized superconducting materials. Fluorinating gas can be used to prepare a fluorinated material on a variety of materials such as powders, articles, layers, etc. (col. 5, lines 25-30).

Therefore, it would have been obvious for one skilled in the art at the time the invention was made to have modified Gressler et al. (5,081,103) process by fluoridating a superconductive film as opposed to a superconductive powder as evidenced by with Chevalier et al. (5132,281) with the expectation of achieving similar success regardless the “form” of the superconducting material being fluorinated.

Gressler et al. (5,081,103) in combination with Chevalier et al. (5132,281) fail to teach spraying the superconductive material on a substrate to form a precursor film.

EP-286,135 teaches flame spraying ceramic oxide superconductors. A superconductor of the formula $\text{M}^1\text{M}^2\text{M}^3$ is formed by flame spraying all the components or by flame spraying M^1 and M^2 and heat treating in an atmosphere of M^3 . M^1M^2 comprise oxides, carbonated and fluorides of Cu, Y, Ba, Eu, Gd, etc. while M^3 comprises oxygen, fluorine, combination thereof, etc. The substrates include, aluminum oxide, silicon nitride, glass, metals, ceramics and polymers. The substrate can be preheated prior to flame spraying to obtain improved properties. (pg. 2, line 30 – pg. 6, line 20)

Art Unit: 1762

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified Gressler et al. (5,081,103) in combination with Chevalier et al. (5132,281) process by spraying the superconductive materials on the substrate with the expectation of achieving similar success.

With respect to the claims reciting carrier gases, specific precursors, etc, it is the Examiner's position that these variables are conventional and are a matter of design choice of one practicing in the art. One skilled in the art at the time the invention was made would have had a reasonable expectation of achieving similar results with any of the know carrier gases and precursors claimed.

Claims 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gressler et al. (5,081,103) in combination with Chevalier et al. (5132,281) further in combination with EP 286,135 still further in combination with JP 01-83651 or Ovshinsky et al. (5,102,860).

Gressler et al. (5,081,103) in combination with Chevalier et al. (5,132,281) further in combination with EP 286,135 fail to teach a plasma discharge for forming the superconducting material.

JP 01-83651 teaches a plasma discharge treatment of a superconducting film with a fluorine compound (abstract).

Ovshinsky et al. (5,102,860) teaches fluorinating a ceramic oxide including a superconducting ceramic oxide. The fluorination process is performed in a fluorine atmosphere by glow discharge plasma (col. 7, lines 40-50).

Art Unit: 1762

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified Gressler et al. (5,081,103) in combination with Chevalier et al. (5,132,281) further in combination with EP 286,135 process by utilizing a plasma discharge as evidenced by JP 01-83651 or Ovshinsky et al. (5,102,860) with the expectation of achieving similar results.

6. Applicant's arguments filed 12/16/05 have been fully considered but they are not persuasive.

Applicant argued that the prior art fails to teach only trace amount of fluorine in the superconducting material instead of incorporating fluorine atoms in the superconductor structure.

Applicant arguments are not commensurate in scope with the arguments. The claims are not limited to a specific amount of fluorine content.

Applicant argued that the prior art teaches fluorinating at temperatures of less than 120°C while is far less than the instant invention.

While the Examiner acknowledges this fact, the claims are not commensurate in scope with the arguments. Furthermore, EP 286,135 teaches heating temperatures up to 900°C to form the final superconducting product.

Applicant argued that the prior art taught fluorinating a superconducting material and not a precursor.

Art Unit: 1762

The Examiner agrees in part. While the Examiner acknowledges the fact that the prior art fails to recite the term “precursor”, however, the prior art clearly recites forming a superconducting film and fluorinating the film to form a final superconductor product. This process step of “transforming” the superconductor to a different and final state would meet the requirements of the claimed “precursor”. The term “precursor” is broad enough to read upon such an interpretation.

In addition the claims are not limited to the “precursor” film being non-superconductive. For that matter, the claims are open to include superconductive and non-superconductive precursors.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 1762

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brian K Talbot
Primary Examiner
Art Unit 1762

BKT